

We claim:

1. A method of treating a disease, condition, or disorder involving glutamate levels, the method comprising administering a transporter compound to an individual exhibiting symptoms of a disease, condition, or disorder involving transport of, or activation by, excitatory amino acids.

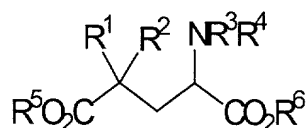
2. The method of claim 1 wherein the transporter compound is an agonist of a glutamate receptor.

3. The method of claim 1 wherein the transporter compound is an antagonist of a glutamate receptor.

4. The method of claim 1 wherein the transporter compound is a ligand of a glutamate receptor.

5. The method of claim 1 wherein the transporter compound selectively binds to one type of glutamate transporter.

6. The method of claim 1 wherein the transporter compound has the structure



wherein

R<sup>1</sup>, R<sup>2</sup>, R<sup>5</sup> and R<sup>6</sup> are independently

- 1) C1-C6-alkyl,
- 2) C3-C4-alkenyl,
- 3) C3-C5-cycloalkyl,
- 4) H, or
- 5) halogen;

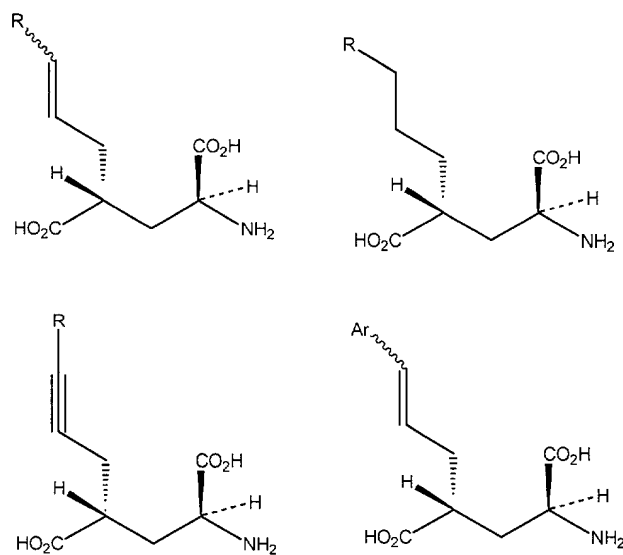
R<sup>3</sup> and R<sup>4</sup> are independently

- 1) H,
- 2) C1-C6-alkyl,
- 3) C3-C4-alkenyl,

- 4) C3-C5-cycloalkyl,
- 5) C1-C6-alkyl-CO-
- 6) C1-C6-alkyl-OCO-
- 7) C1-C6-alkyl-NHCO-
- 8) C1-C6-alkyl-SO<sub>2</sub>-
- 9) CF<sub>3</sub>SO<sub>2</sub>-
- 10) PhSO<sub>2</sub>-
- 11) HCO-, or
- 12) C3-C6-alkynyl; and

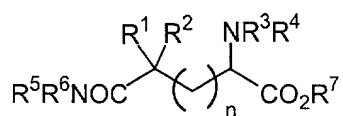
R<sup>3</sup> and R<sup>4</sup> taken together can be -CH<sub>2</sub>(CH<sub>2</sub>)<sub>n</sub>CH<sub>2</sub>- wherein n is 0, 1, 2, or 3.

7. The method of claim 1 wherein the transporter compound has the structure



wherein R = H, C1-C6-alkyl, C3-C4-alkenyl, C3-C5-cycloalkyl, C1-C6-alkyl-CO-, C1-C6-alkyl-OCO-, C1-C6-alkyl-NHCO-, HCO-, or C3-C6-alkynyl.

Figure 1 consists of 12 histograms arranged in a single column. Each histogram represents the distribution of the number of non-zero elements in the vector  $x$  for a specific value of  $n$ . The x-axis for all histograms is labeled 'x' and ranges from 0 to 120. The y-axis is labeled 'count' and ranges from 0 to 100. The histograms are for  $n = 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120$ . As  $n$  increases, the distribution of  $x$  becomes more concentrated around zero, with the peak count increasing significantly.



wherein

n is an integer selected from the group consisting of 0, 1, 2, and 3;

$R^1, R^2, R^5$  and  $R^7$  are independently

- 1) C1-C6-alkyl,
- 2) C3-C4-alkenyl,
- 3) C3-C5-cycloalkyl,
- 4) H, or
- 5) halogen;

$R^3$  and  $R^4$  are independently

- 1) H,
- 2) C1-C6-alkyl,
- 3) C3-C4-alkenyl,
- 4) C3-C5-cycloalkyl,
- 5) C1-C6-alkyl-CO-
- 6) C1-C6-alkyl-OCO-
- 7) C1-C6-alkyl-NHCO-
- 8) C1-C6-alkyl-SO<sub>2</sub>-
- 9) CF<sub>3</sub>SO<sub>2</sub>-
- 10) PhSO<sub>2</sub>-
- 11) HCO-, or
- 12) C3-C6-alkynyl;

R<sup>3</sup> and R<sup>4</sup> taken together can be -CH<sub>2</sub>(CH<sub>2</sub>)<sub>m</sub>CH<sub>2</sub>- wherein m is 0, 1, 2, or 3;

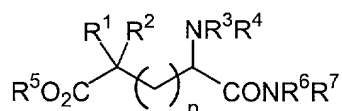
 $R^6$  is independently

- 1) H,
- 2) C1-C6-alkyl,

- 

R<sup>5</sup> and R<sup>6</sup> taken together can be -CH<sub>2</sub>(CH<sub>2</sub>)<sub>k</sub>CH<sub>2</sub>- wherein k is 0, 1, 2, or 3.

9. The method of claim 1 wherein the transporter compound has the structure



wherein

n is an integer selected from the group consisting of 0, 1, 2, and 3;

$R^1, R^2, R^5$  and  $R^7$  are independently

- 1) C1-C6-alkyl,
- 2) C3-C4-alkenyl,
- 3) C3-C5-cycloalkyl,
- 4) H, or
- 5) halogen;

$R^3$  and  $R^4$  are independently

- 1) H,
- 2) C1-C6-alkyl,
- 3) C3-C4-alkenyl,
- 4) C3-C5-cycloalkyl,
- 5) C1-C6-alkyl-CO-

- 6) C1-C6-alkyl-OCO-
- 7) C1-C6-alkyl-NHCO-
- 8) C1-C6-alkyl-SO<sub>2</sub>-
- 9) CF<sub>3</sub>SO<sub>2</sub>-
- 10) PhSO<sub>2</sub>-
- 11) HCO-, or
- 12) C3-C6-alkynyl;

R<sup>3</sup> and R<sup>4</sup> taken together can be -CH<sub>2</sub>(CH<sub>2</sub>)<sub>m</sub>CH<sub>2</sub>- wherein m is 0, 1, 2, or 3.

R<sup>6</sup> is independently

- 1) H,
- 2) C1-C6-alkyl,
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- 9) CF<sub>3</sub>SO<sub>2</sub>-
- 10) PhSO<sub>2</sub>-
- 11) HCO-, or
- 12) C3-C6-alkynyl; and

R<sup>6</sup> and R<sup>7</sup> taken together can be -CH<sub>2</sub>(CH<sub>2</sub>)<sub>k</sub>CH<sub>2</sub>- wherein k is 0, 1, 2, or 3.